

Urinary tract infections 29 times more likely in schizophrenia relapse

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Schizophrenia patients experiencing relapse are 29 times more likely than healthy individuals to have a urinary tract infection, researchers report.

[Urinary tract infections](#), which can cause painful and frequent urination, are common but patients hospitalized for schizophrenia are even more likely to have a UTI than healthy individuals or even others whose illness is under control, said Dr. Brian J. Miller, psychiatrist and schizophrenia expert at the Medical College of Georgia at Georgia Regents University.

The study comparing UTI rates in 57 relapsed hospitalized patients, 40 stable outpatients and 39 healthy controls showed that 35 percent of the relapsed patients had UTIs versus 5 and 3 percent, respectively, of the other groups.

While it's too early to know which comes first, the UTI or acute schizophrenia relapse, the association means relapsed patients should be tested for a UTI, said Miller, corresponding author of the study in *Journal of Clinical Psychiatry*.

Relapse can produce delusions and symptoms that can impede good hygiene and adequate hydration, increasing the risk of UTIs. However Miller, who pursued the study because he's seen improvement in patients' [psychiatric condition](#) simply by treating them with antibiotics for a UTI, said UTIs could be the trigger.

This seemingly odd association between infection and relapse of a brain disorder also has surfaced in dementia, in which a significant percentage of patients with worsening [aggressive behavior](#) and [psychotic symptoms](#) have a UTI that, when treated, improves dementia-related problems.

"The questions we are asking is, 'Does that same phenomena seem to take place in patients with schizophrenia?' and we are finding evidence that it does," Miller said.

It's clear that the immune system is a player in the heterogeneous disorder, which affects about 1 percent of the population, causing hallucinations, depression and impaired thinking and [social behavior](#). Babies born to mothers who develop a severe infection, such as influenza or pneumonia, during pregnancy have a significantly increased risk of schizophrenia.

Miller and others suspect that the mother's infection somehow reprograms the baby's immune system so its reactions are more extreme – more aggressive at times, more passive at others – leaving the individual vulnerable to both infections and autoimmune diseases, such as lupus, where the body's immune system attacks itself. Schizophrenia patients die on average 15-20 years earlier than the general population, have an eight-fold increased risk of death from pneumonia and nearly five percent increased risk of death from all infectious diseases.

The study included reviewing charts of patients with acute illness relapses that required hospitalization and actively recruiting clinically stable outpatients with schizophrenia and healthy controls. Urine cultures, which identify specific bacterium causing the [urinary tract](#) infection, were not available for most of the acutely ill patients. However, urinalysis, a broader screening test for disease or UTIs, were available.

Miller has already completed a similar study in a larger number of

patients that found comparable correlations of UTIs in relapsed patients. He is pursuing prospective studies of acutely ill patients where urine cultures are obtained and wants to also look at giving antibiotics to prevent UTIs in those with a history to see if that also reduces their incidence of schizophrenia relapse. He's in the midst of a related, National Institute of Mental Health-funded study looking at blood levels of interleukin 6, a protein that helps regulate inflammation, to see if they are a red flag for relapse in some [schizophrenia patients](#).

Miller and his colleagues note in the published study that some older antipsychotic medications reduce urination, which can increase the risk of UTIs, although most of the patients were on newer drugs. About 34 percent of adults over age 20 say they have had least one UTI and 1 in 5 women develop UTIs over their lifetime, according to the Kidney and Urology Foundation of America.

About 82 percent of [patients](#) with [schizophrenia](#) experience [relapse](#) within five years of their first episode, making them more treatment-resistant and further impairing their ability to think and function.

Provided by Medical College of Georgia

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